

INTRODUCTION

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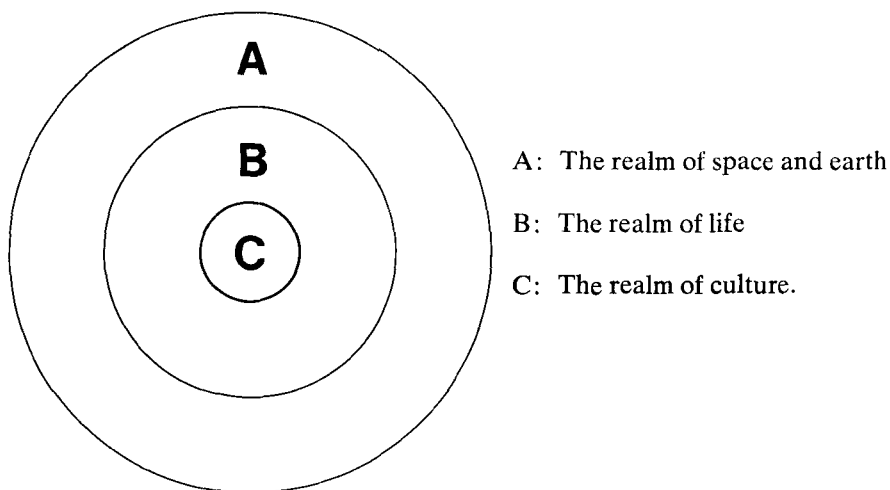
The present *Public Policy Toward Environment 1973: A Review and Appraisal* is an outgrowth of the International Joint Conference on Environment and Society in Transition held on the premises of The New York Academy of Sciences April 27-May 2, 1970, under the auspices of the American Division of the World Academy of Art and Science and the American Geographical Society. The conference resulted in a publication of the same name.

The 1970 Conference considered scientific developments in all fields related to the environment, and examined the social consequences and policy implications of past and potential attempts to utilize available knowledge. The several panels into which the Conference was divided drew up provisional statements of recommended goals and principles of public policy relevant to their sectors of competence and concern.

A theme that ran through the deliberations of the Conference and received emphatic expression in its conclusions was the importance of *continuity* in the relationship between the scientific community and the public policy process. Too often the connections are episodic, stimulated perhaps by sudden awareness on the part of the public of an emergency, or by alarm among scientists when their appropriations are under attack. If the concern of scientists with the public interest is to be credible to the general public, evidence of continuing involvement must be forthcoming.

A distinctive means by which scientists can contribute regularly to public policy is by offering periodic commentary on what has been done or left undone and by suggesting more adequate goals and strategies. These periodic reviews and appraisals are distinctive since they are voluntary and draw on the best available scientific knowledge. A basis is provided for judging present and prospective policy alternatives. These statements are distinctive in another sense: they diminish intellectual fragmentation by utilizing comprehensive maps of man and his environment, and by relating particular problems to the setting where they occur.

A convenient image of "man in context" emphasizes three interpenetrating environments or realms:



The sciences and arts are organized in reference to these realms or, as in the case of mathematics, they furnish conceptual tools that apply anywhere. It is evident that astronomy and geology are oriented toward space and earth. The biological and medical sciences focus on life. Anthropology, economics, political science, law and the other social sciences are specialized to culture.

As a living form man strives to optimize his preferred outcomes (values) and perceives the environment in terms of his needs and desires. Imagination enables us to think beyond the impact of the environment on us and to consider our impact on it. In the formulation of goals and strategies both perspectives must be kept in view.

A glance at the table of contents of the present *Review and Appraisal* shows that most of the reports use the physical or biological environment as the "take-off" point. Their assignment quickly brings them into the realm of culture, since it includes the formation and execution of policy at national, transnational and sub-national levels. Some panels are interdisciplinary, often including lawyers who have worked closely enough with science or scientists to maintain easy communication.

The take-off point of some Reports are "population" or "values and institutions," such as family and education. Manifestly these Reports are part of the realms of biology and culture. In every case interdisciplinary cooperation is involved.

Each reviewer or reviewing panel has interpreted the task in a comparable though variable manner. In view of the novelty of the enterprise, diversity has been encouraged. It is obvious that novelty does not lie in the act of passing judgment on public officials, agencies or policies. For instance, we are accustomed to official commissions appointed to look into a situation, evaluate what has been done, and offer recommendations. It is common to

rely on relatively standardized governmental or private procedures to produce technical summaries of performance in limited areas. Thus social indicators show that traffic accidents, cancer, crimes against person or property, and so on, are increasing, declining, or holding steady.

The scope of the present *Review and Appraisal* is not identical with these models. A Review differs from a "one-shot" Report since it is intended to be a step in a series of steps. A relatively comprehensive Review differs from a standardized summary of a precisely defined and tightly restricted set of social indicators in several ways. Full use is made of whatever indicators are pertinent to an environmental sector without, however, being able to rely on a wholly inclusive and satisfactory body of information. Reviews deal with sectors of the environment toward which public policies are incompletely formulated. Goals and principles may be somewhat obscure, contradictory or confused; legal prescriptions and procedures may be missing or inept; organizational structures may be in flux; technologies may be underdeveloped, obsolescent, or in debate; public support may be ineffectively mobilized. In a word, while a great deal of information is available the links between knowledge and public action are often fragile.

Report writers were invited to be brief on the assumption that short statements of policy and characterizations of fact can be both well-formulated and effective. Among the points to be considered the following were suggested:

a. *Goals of public policy.* What are the general objectives of public policy toward that portion of the Environment with which the Panel is concerned? When were these goals formulated? What form was used: (Where they part of treaties, statutes, ordinances, administrative regulations, etc?..) Approximately when were the objectives stated?

b. *Criteria of performance.* What criteria are relevant to the problem of reviewing the adequacy of policy formulation and performance: Which criteria have already been recognized by public authorities as pertinent? For example, consider the clarity and comprehensiveness of public policy. How clearly are objectives specified in reference to use, conservation, waste and pollution, and the distribution of burden and benefit? Have the lines of responsible authority been precise or vague?

c. *Positive and Negative Achievement.* Have the technologies applied or encouraged been relatively the most adequate? Have the organizational structures been cognizant of their responsibilities and supplied with the legal authority, the monetary and other facilities required to operate effectively? Have the relevant authorities actively mobilized the public and group interest necessary to initiate and support what needs to be done?

d. *Optimum Proposals.* Each Panel is encouraged to indicate some suggested alternatives in technological, organizational, legal, and operational realms.

PART I

Earth and Space

